intel®

OLD

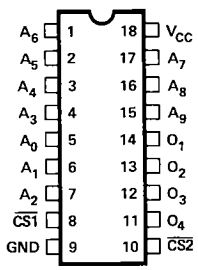
3605, 3625
HIGH SPEED 1K x 4 PROM

3605-2, 3625-2	60 ns Max.
3605, 3625	70 ns Max.

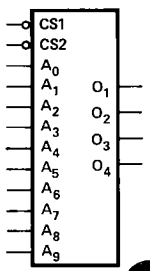
- **Fast Access Time: 45ns Typically**
- **Low Power Dissipation: 0.14 mW/bit Typically**
- **Open Collector (3605) and Three-State (3625) Outputs**
- **Hermetic 18 Pin DIP**

The 3605/3625 is a high density 4096 bit PROM suitable for uses where fast turnaround and pattern experimentation are important such as in prototypes or in small production volume systems. The PROMs are manufactured with all outputs high and logic low levels can be electrically programmed in selected bit locations.

PIN CONFIGURATION



LOGIC SYMBOL



Absolute Maximum Ratings*

Temperature Under Bias	-10°C to +85°C
Storage Temperature	-65°C to +160°C
Output or Supply Voltages	-0.5V to 7 Volts
All Input Voltages	-1V to 5.5V
Output Currents	100 mA

*COMMENT

Stresses above those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. This is a stress rating only and functional operation of the deivce at these or at any other condition above those indicated in the operational sections of this specification is not implied.

D.C. Characteristics All Limits Apply for V_{CC} = +5.0V ±5%, T_A = 0°C to +75°C

Symbol	Parameter	Limits Min.	Typ.[1]	Max.	Unit	Test Conditions
I_{FA}	Address Input Load Current		-0.05	-0.25	mA	V_{CC}=5.25V, V_A=0.45V
I_{FS}	Chip Select Input Load Current		-0.05	-0.25	mA	V_{CC}=5.25V, V_S=0.45V
I_{RA}	Address Input Leakage Current			40	μA	V_{CC}=5.25V, V_A=5.25V
I_{RS}	Chip Select Input Leakage Current			40	μA	V_{CC}=5.25V, V_S=5.25V
V_{CA}	Address Input Clamp Voltage		-0.9	-1.5	V	V_{CC}=4.75V, I_A=-10mA
V_{CS}	Chip Select Input Clamp Voltage		-0.9	-1.5	V	V_{CC}=4.75V, I_S=-10mA
V_{OL}	Output Low Voltage		0.3	0.45	V	V_{CC}=4.75V, I_{OL}=15mA
I_{CEX}	3605 Output Leakage Current			40	μA	V_{CC}=5.25V, V_{CE}=5.25V
I_{CC}	Power Supply Current		110	150	mA	V_{CC} = 5.25V, $V_{A0}\rightarrow V_{A9}$=0V, $\overline{CS}_1=\overline{CS}_2=V_{IH}$
V_{IL}	Input "Low" Voltage			0.85	V	V_{CC}=5.0V
V_{IH}	Input "High" Voltage	2.0			V	V_{CC}=5.0V

3625, 3625-2 ONLY

Symbol	Parameter	Min.	Typ.[1]	Max.	Unit	Test Conditions
$\|I_O\|$	Output Leakage for High Impedance Stage			40	μA	V_O=5.25V or 0.45V, V_{CC}=5.25V, $\overline{CS}_1=\overline{CS}_2$=2.4V
I_{SC}[2]	Output Short Circuit Current	-15	-25	-60	mA	V_O = 0V
V_{OH}	Output High Voltage	2.4			V	I_{OH}=-2.4mA, V_{CC} = 4.75V

NOTES: 1. Typical values are at 25°C and at nominal voltage. 2. Unmeasured outputs are open during this test.

A.C. Characteristics V_{CC} = +5V ±5%, T_A = 0°C to +75°C

Symbol	Parameter	Max. Limits 3605-2 3625-2	Max. Limits 3605 3625	Unit	Conditions
t_{A++}, t_{A--} t_{A+-}, t_{A-+}	Address to Output Delay	60	70	ns	$\overline{CS}_1$=$\overline{CS}_2$=V_{IL} to select the PROM.
t_{S++}	Chip Select to Output Delay	30	30	ns	
t_{S--}	Chip Select to Output Delay	30	30	ns	

Capacitance [1] T_A = 25°C, f = 1 MHz

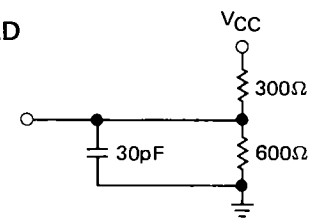
SYMBOL	PARAMETER	LIMITS TYP.	LIMITS MAX.	UNIT	TEST CONDITIONS
C_{INA}	Address Input Capacitance	4	10	pF	V_{CC} = 5V V_{IN} = 2.5V
C_{INS}	Chip-Select Input Capacitance	6	10	pF	V_{CC} = 5V V_{IN} = 2.5V
C_{OUT}	Output Capacitance	7	12	pF	V_{CC} = 5V V_{OUT} = 2.5V

NOTE 1: This parameter is only periodically sampled and is not 100% tested.

Switching Characteristics

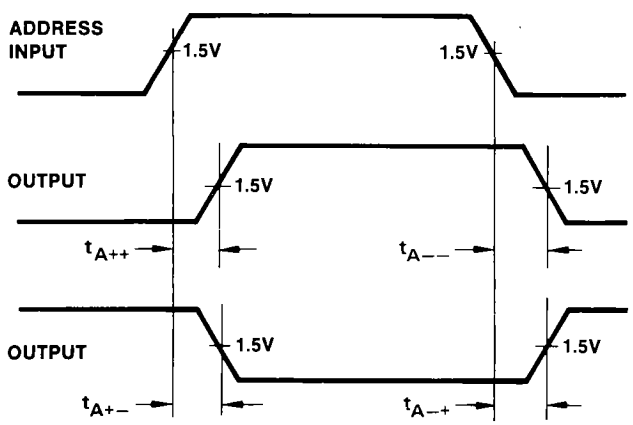
Conditions of Test:
Input pulse amplitudes - 2.5V
Input pulse rise and fall times of
5 nanoseconds between 1 volt and 2 volts
Speed measurements are made at 1.5 volt levels
Output loading is 15 mA and 30 pF
Frequency of test - 2.5 MHz

15mA TEST LOAD



Waveforms

ADDRESS TO OUTPUT DELAY



CHIP SELECT TO OUTPUT DELAY